

THERE IS CLAIMED:

1. A microwave filter including a transmission microstrip, at least one lateral microstrip connected to said transmission microstrip, and at least two dielectric resonators, and wherein said at least one lateral microstrip is coupled to said at least two dielectric resonators so that it can resonate with said at least two dielectric resonators.
2. The filter claimed in claim 1 wherein said lateral microstrips form a series of U-shapes, two successive U-shapes having a common branch.
3. The filter claimed in claim 2 wherein the center of each dielectric resonator is equidistant from two branches of a U-shape.
4. The filter claimed in claim 1 wherein each dielectric resonator has a relative permittivity of not less than 10.
5. The filter claimed in claim 1 further including adjustment elements adapted to be moved arbitrarily relative to said dielectric resonators to modify respective resonant frequencies of said dielectric resonators.
6. The filter claimed in claim 1 wherein each lateral microstrip has a length substantially equal to  $3\lambda_m/4$  where  $\lambda_m$  represents a wavelength to be attenuated.
7. The filter claimed in claim 1 including at least three lateral microstrips connected to said transmission microstrip, and at least two dielectric resonators respectively placed between a first and a second lateral microstrip and between the second lateral microstrip and a third lateral microstrip.
8. A microwave antenna including radiating elements and at least one filter as claimed in any of claims 1 to 7 in a common chassis or housing.
9. The antenna claimed in claim 8 including radio frequency protection for said filter.
10. The antenna claimed in claim 8 including radiating elements operating in different frequency bands.